

REMARKS

Claim 1 has been amended and claims 18-20 have been added.

Claim 1 was rejected as anticipated by TAKATANI et al. JP 07-220755. TAKATANI et al. do not disclose a third terminal that is separated from a path of a current that is caused by charge and discharge of the flat secondary battery, so that the third terminal has a same potential as a potential of the one of the positive and negative electrode collectors to which the third terminal is attached.

The device in TAKATANI et al. includes PTCs that suppress charge or discharge currents when an overcurrent occurs. To accomplish this, the third terminal is necessarily arranged in the path of the current that is caused by charge or discharge of the battery. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1-4, 6, 9-10, and 13-17 were rejected as unpatentable over YANAI et al. 6,458,485; claim 7 was rejected further in view of TAKATANI et al.; and claims 5, 8, and 11-12 were rejected further in view of HIGASHIJIMA 5,886,502. Reconsideration and withdrawal of the rejection are respectfully requested.

As in TAKATANI et al., the device in YANAI et al. includes PTCs that suppress charge or discharge currents when an overcurrent occurs. To accomplish this, the third terminal is

necessarily arranged in the path of the current that is caused by charge or discharge of the battery. Reconsideration and withdrawal of the rejection are respectfully requested.

Further, YANAI et al. do not disclose a third terminal to which a control circuit of claims 5 and 11-12, could be attached. The PTC element is an internal element with no part that could be considered a terminal to which anything can be attached. Indeed, when viewing the structure of Figures 5 and 6, it is apparent that the only terminals are at 9 and that there is no third terminal or a place for one. It is not clear how or why one of skill in the art would attach anything to the PTC that is inside the casing and clearly not intended to be a terminal to which anything is attached. Accordingly, one of skill in the art would not be motivated to modify YANAI et al. to provide a third terminal to which a control circuit could be attached.

New claim 20 is supported by Figures 7-8 and the related description. Further, Figures A and B below help explain an advantage of the storage battery of claim 20. The invention of claim 20 allows the control system to obtain the correct potential of the positive and negative electrode collectors, which results in improved control by the control system.

CONVENTIONAL

(Containing Higashijima's circuit)

When " I_s " is so large, Higashijima's circuit does not measure correct voltage due to the IR-drop caused by the terminal resistance (R_c , R_a). The change of " I_s " causes the measured voltage to change.

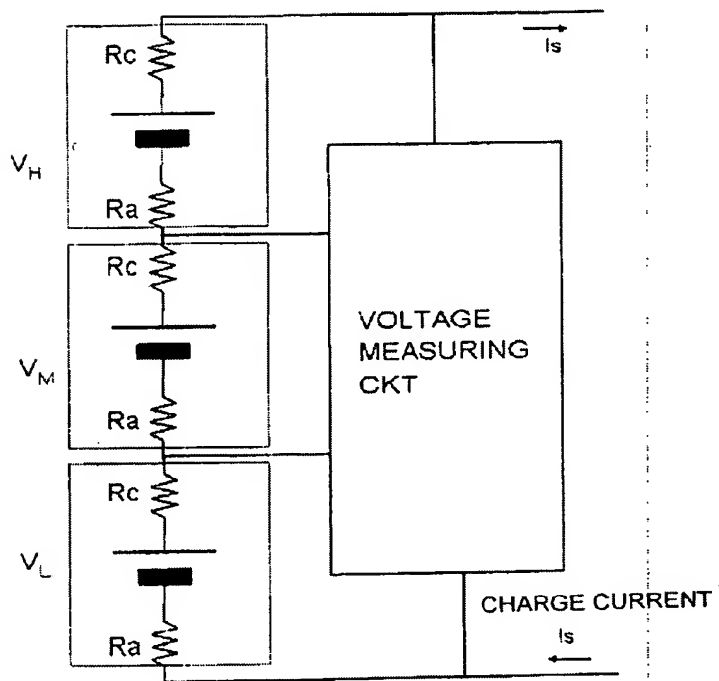


Fig. A

OUR TECHNIQUE

In case of Figs. 7 and 8 of the specification

In our technique, the voltage of the electric power generating element (EGE) is measured correctly, the voltage is not influenced by the change of " I_s " because the "third terminal" connects EGE so as to avoid the resistance of the electrode terminals (R_c , R_a).

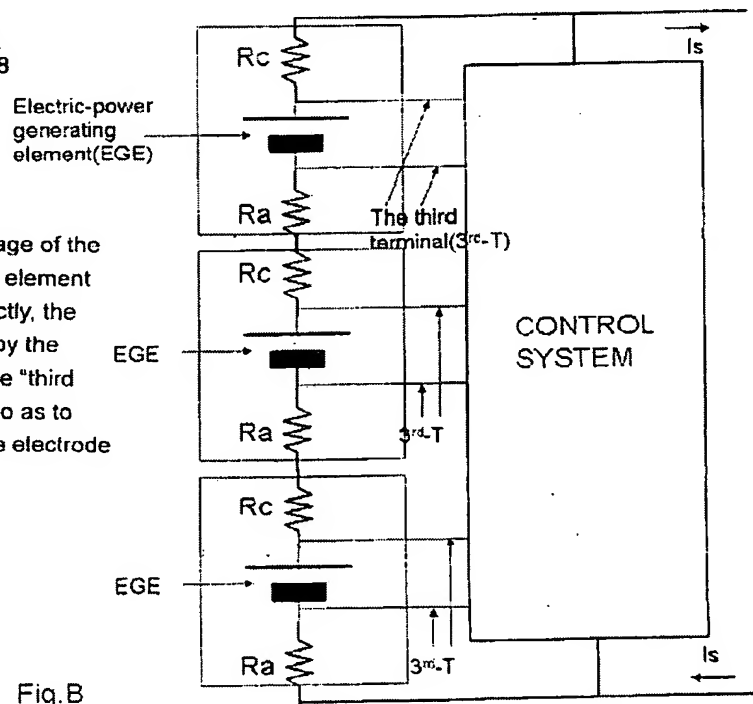


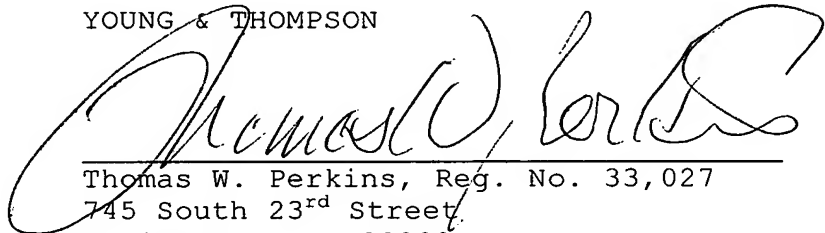
Fig. B

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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A large, stylized handwritten signature in black ink, appearing to read 'Thomas W. Perkins', is written over a horizontal line.

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